

Application No. 10/826,709  
Reply to Office Action dated March 24, 2005

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listing, of claims in the application.

Listing of Claims:

1. (Currently amended) A multilayer edible moisture barrier suitable to separate food components having different water activities in a food product, said moisture barrier comprising:  
~~at least one lipid layer, wherein the at least one lipid layer which comprises from about 65 weight percent of an edible low melting triglyceride blend having a melting point of 35 C or lower, and the lipid layer including from about 1 to about 35 percent of the fat crystal control agent and wherein the fat crystal control agent is an edible microparticulated high melting lipid having a melting point of 70° C or higher and a volume average particle size of less than about 10 microns, at least about 5 percent of the lipid particles having a particle size of not more than 0.1 micron, the lipid layer having a solid fat content of from about 50 to about 70 percent at a storage temperature, the solid fat content of the lipid layer not changing more than about 5% at a refrigerated storage temperature of 5°C ±5 degrees C or at an ambient storage temperature of 15° to 25°C; and~~  
at least one flexible hydrophobic barrier layer.

2-3. (cancel)

4. (previously presented) The moisture barrier of claim 1, wherein the lipid layer has a solid fat content of from about 50 to about 70 percent at a refrigerated storage temperature of 0°C to 10 5°C and at an ambient storage temperature of 15°C to 25°C.

5. (previously presented) The moisture barrier of claim 4, wherein the lipid layer has a solid fat content of from about 55 to about 70 percent.

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6. (previously presented) The moisture barrier of claim 5, wherein the lipid layer has a solid fat content of from about 60 to about 65 percent.

7. (currently amended) The moisture barrier of claim 1, wherein the lipid layer has a solid fat content of less than about 35 3 percent above 37°C.

8. (cancel)

9. (previously presented) The moisture barrier of claim 1, wherein the edible microparticulated high melting lipid is selected from the group consisting of stearic acid, arachidic acid, behenic acid, lignoceric acid, glyceryl monostearate, glycerol distearate, glycerol tristearate, calcium stearate, magnesium stearate, high melting sucrose polyesters, high melting fatty alcohols, high melting waxes, high melting phospholipids, and mixtures thereof.

10. (previously presented) The moisture barrier of claim 1, wherein the edible microparticulated high melting lipid is calcium stearate.

11. (original) The moisture barrier of claim 1, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

12. (previously presented) The moisture barrier of claim 1, wherein the at least one lipid layer contains about 5 to about 25 percent of the edible microparticulated high melting lipid and wherein the edible microparticulated high melting lipid has a melting point of 100°C or higher and a volume average particle size of less than about 5 microns.

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13. (original) The moisture barrier of claim 12, wherein the at least one lipid layer comprises about 5 to about 15 percent of the edible microparticulated high melting lipid.

14. (original) The moisture barrier of claim 1, wherein the lipid layer is about 50 microns to about 1 mm thick.

15. (original) The moisture barrier of claim 1, wherein the lipid layer further comprises a dispersion of solid particles, the solid particles selected from the group consisting of solid particles of chocolate, peanut butter, confectionery cream, and mixtures thereof.

16. (original) The moisture barrier of claim 1, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

17. (cancel)

18. (original) The multilayer edible moisture barrier of claim 16, wherein the flexible hydrophobic layer is about 50 microns to about 1 mm thick.

19. (cancel)

20. (currently amended) A method for reducing moisture migration between food components having different water activities in a food product, said method comprising applying an edible multilayer moisture barrier between the food components; and

applying at least one flexible hydrophobic layer, wherein the edible multilayer moisture barrier comprises at least one lipid layer comprising from about 65 weight percent of an edible low melting triglyceride blend having a melting point of 35°C or lower;

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from about 1 to about 35 weight percent of an edible microparticulated high melting lipid having a melting point of 70°C or higher, and

at least one flexible hydrophobic layer, the microparticles in the lipid layer including about 1 to about 35 percent of the fat crystal control agent and wherein the fat crystal control agent is an edible microparticulated high melting lipid having a melting point of 70°C or higher and having a volume average particle size of less than about 10 microns, at least about 5 percent of the lipid particles having a particle size of not more than 0.1 micron, the lipid layer having a solid fat content of from about 50 to about 70 percent at a storage temperature, the solid fat content of the lipid layer not changing more than about 5% at a refrigerated storage temperature of 0°C to 10°C or at an ambient storage temperature of 15°C to 25°C

21. (currently amended) The method of claim 20, wherein the at least one lipid layer has a solids fat content of from about 50 to about 70 percent at a refrigerated storage temperature of 0°C to 5°C and at an ambient storage temperature of 15°C to 25°C.

22. (currently amended) The method of claim 21, wherein the at least one lipid layer has a solids fat content of from about 60 to about 65 percent.

23. (currently amended) The method of claim 20, wherein the lipid layer has a solids fat content of less than about 35 percent above 37°C.

24-26. (cancel)

27. (previously presented) The method of claim 20, wherein the edible microparticulated high melting lipid is selected from the group consisting of stearic acid, arachidic acid, behenic acid, lignoceric acid, glyceryl monostearate, glycerol distearate, glycerol tristearate, calcium stearate, magnesium stearate, high melting sucrose polyesters, high melting fatty alcohols, high melting waxes, high melting phospholipids, and mixtures thereof.

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28. (original) The method of claim 27, wherein the edible microparticulated high melting lipid is calcium stearate.

29. (original) The method of claim 20, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

30. (currently amended) The method of claim 27 28, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

31. (original) The method of claim 20, wherein the at least one lipid layer contains about 5 to about 25 percent of the edible microparticulated high melting lipid and wherein the melting point of the edible microparticulated high melting lipid is about 100°C or higher and the volume average particle size of the edible microparticulated high melting lipid is about 5 microns or less.

32. (original) The method of claim 20, wherein the lipid layer is about 50 microns to about 1 mm thick.

33. (original) The method of claim 20, wherein the lipid layer further comprises a dispersion of solid particles, the solid particles selected from the group consisting of solid particles of chocolate, peanut butter, confectionery cream and mixtures thereof.

34. (original) The method of claim 20, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of

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monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

35. (original) The method of claim 34, wherein the flexible hydrophobic layer is about 50 microns to about 1 mm thick.

36. (currently amended) The method of claim 30 32, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

37. (original) The method of claim 36, wherein the flexible hydrophobic layer is about 50 microns to about 1 mm thick.

38. (new) A multilayer edible moisture barrier suitable to separate food components having different water activities in a food product, said moisture barrier comprising:

at least one lipid layer which comprises from about 65 weight percent of an edible low melting triglyceride blend having a melting point of 35° C or lower, and from about 1 to about 35 percent of an edible microparticulated high melting lipid having a melting point of 70° C or higher and a volume average particle size of less than about 10 microns at least about 5 percent of the lipid particles having a particle size of not more than 0.1 micron, the lipid layer having a solid fat content of from about 50 to about 70 percent at a storage temperature, the solid fat content of the lipid layer not changing more than about 5% at a refrigerated storage temperature of 5°C ± 5 degrees C, the lipid layer having sufficient lipid particles of not more than 0.1 micron which are effective to immobilize liquid oil in the barrier composition from draining from a fat crystal network in the barrier composition in an amount that is more than if the particles of not more

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than 0.1 microns were not present; and  
at least one flexible hydrophobic barrier layer.

39. (new) The multilayer edible moisture barrier of claim 38, wherein from 1 to about 20 of the microparticulated particles of the high melting lipid have a particle size of less than 1 micron and a volume average particle size of less than about 5 microns.

40. (new) The moisture barrier of claim 39, wherein the lipid layer has a solid fat content of from about 60 to about 65 percent.

41. (new) The moisture barrier of claim 40, wherein the lipid layer has a solid fat content of less than about 35 percent above 37°C.

42. (new) The moisture barrier of claim 39, wherein the edible microparticulated high melting lipid is selected from the group consisting of stearic acid, arachidic acid, behenic acid, lignoceric acid, glyceryl monostearate, glycerol distearate, glycerol tristearate, calcium stearate, magnesium stearate, high melting sucrose polyesters, high melting fatty alcohols, high melting waxes, high melting phospholipids, and mixtures thereof.

43. (new) The moisture barrier of claim 39, wherein the edible microparticulated high melting lipid is calcium stearate.

44. (new) The moisture barrier of claim 42, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

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45. (new) The moisture barrier of claim 44, wherein the at least one lipid layer contains about 5 to about 25 percent of the edible microparticulated high melting lipid and wherein the edible microparticulated high melting lipid has a melting point of 100°C or higher.

46. (new) The moisture barrier of claim 39, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

47. (new) The moisture barrier of claim 44, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

48. (new) A method for reducing moisture migration between food components having different water activities in a food product, said method comprising applying an edible multilayer moisture barrier between the food components; and

at least one flexible hydrophobic layer, wherein the edible multilayer moisture barrier comprises at least one lipid layer comprising from about 65 weight percent of an edible low melting triglyceride blend having a melting point of 35°C or lower, and

from about 1 to about 35 weight percent of an edible microparticulated high melting lipid having a melting point of 70°C or higher, the microparticles in the lipid layer having a volume average particle size of less than about 10 microns, at least about 5 percent of the lipid particles having a particle size of not more than 0.1 microns, the lipid layer having a solid fat content of from about 50 to about 70 percent at a storage temperature, the solid fat content of the lipid layer not changing more than about 5% at a refrigerated storage temperature of 5°C ±5 degrees C, the

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lipid layer having sufficient lipid particles of not more than 0.1 micron which are effective to immobilize liquid oil in the barrier composition from draining from a fat crystal network in the barrier composition in an amount that is more than if the particles of not more than 0.1 microns were not present.

49. (new) The method of claim 38, wherein from 1 to about 20 of the microparticulated particles of the high melting lipid have a particle size of less than 1 micron and a volume average particle size of less than 5 microns.

50. (new) The method of claim 49, wherein the lipid layer has a solid fat content of from about 60 to about 65 percent.

51. (new) The method of claim 50, wherein the lipid layer has a solid fat content of less than about 35 percent above 37°C.

52. (new) The method of claim 49, wherein the edible microparticulated high melting lipid is selected from the group consisting of stearic acid, arachidic acid, behenic acid, lignoceric acid, glyceryl monostearate, glycerol distearate, glycerol tristearate, calcium stearate, magnesium stearate, high melting sucrose polyesters, high melting fatty alcohols, high melting waxes, high melting phospholipids, and mixtures thereof.

53. (new) The method of claim 49, wherein the edible microparticulated high melting lipid is calcium stearate.

54. (new) The moisture barrier of claim 52, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

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55. (new) The method of claim 54, wherein the at least one lipid layer contains about 5 to about 25 percent of the edible microparticulated high melting lipid and wherein the edible microparticulated high melting lipid has a melting point of 100°C or higher.

56. (new) The method of claim 49, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

57. (new) The method of claim 55, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

58. (new) The moisture barrier of claim 9, wherein the edible low melting triglyceride blend is selected from the group consisting of natural, hydrogenated, fractionated and modified coconut oil, palm kernel oil, rapeseed oil, soybean oil, palm oil, sunflower oil, corn oil, canola oil, cottonseed oil, peanut oil, cocoa butter, anhydrous milkfat, lard, beef fat, acetylated monoglyceride, and mixtures thereof.

59. (new) The moisture barrier of claim 58, wherein the flexible hydrophobic layer is selected from the group consisting of waxes, acetic acid esters of monoglycerides, succinic acids of monoglycerides, citric acid esters of monoglycerides, propylene glycol monoesters, triglycerides containing at least one C<sub>2</sub> to C<sub>4</sub> fatty acid and at least one C<sub>12</sub> to C<sub>24</sub> fatty acid, alpha crystal forming lipids, and mixtures thereof.

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60. (new) The moisture barrier of claim 59, wherein the at least one lipid layer contains about 5 to about 25 percent of the edible microparticulated high melting lipid and wherein the edible microparticulated high melting lipid has a melting point of 100°C or higher and a volume average particle size of less than about 5 microns.

61. (new) The multilayer edible moisture barrier of claim 60, wherein the flexible hydrophobic layer is about 50 microns to about 1 mm thick.

62. (new) The method of claim 20 wherein the flexible hydrophobic layer is applied onto the lipid layer.

63 (new) The method of claim 36 wherein the flexible hydrophobic layer is applied onto the lipid layer.

64. (new) The method of claim 48 wherein the flexible hydrophobic layer is applied onto the lipid layer.

65. (new) The method of claim 57 wherein the flexible hydrophobic layer is applied onto the lipid layer.